

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (currently amended) A method for screening for compounds that affect uncoupling, comprising:
contacting a mammalian cell or tissue sample with a candidate compound; analyzing expression of a polypeptide having at least ~~90~~95% sequence identity to a polypeptide encoded by SEQ ID NO:1 or 2 wherein the polypeptide having at least 95% sequence identity has uncoupling activity; and
analyzing mitochondrial membrane potential,
wherein a change in expression of the polypeptide having at least 95% sequence identity indicates that the compound affects uncoupling.
- 2-27. (canceled)
28. (previously presented) The method of claim 1, wherein the mammalian cell or tissue sample is a human cell or tissue sample.
- 29-33. (canceled)
34. (previously amended) The method of claim 1, wherein the analyzing of expression of the polypeptide comprises analyzing expression of a polypeptide having at least 95% amino acid sequence identity to the polypeptide encoded by SEQ ID NO:1.
35. (previously amended) The method of claim 1, wherein the analyzing of expression of the polypeptide comprises analyzing expression of a polypeptide having at least 95% amino acid sequence identity to the polypeptide encoded by SEQ ID NO:2.

36. (previously amended) The method of claim 28, wherein the analyzing of expression of the polypeptide comprises analyzing expression of a polypeptide having at least 95% amino acid sequence identity to the polypeptide encoded by SEQ ID NO:1.

37. (previously amended) The method of claim 28, wherein the analyzing of expression of the polypeptide comprises analyzing expression of a polypeptide having at least 95% amino acid sequence identity to the polypeptide encoded by SEQ ID NO:2.

38. (previously presented) The method of claim 1, wherein the candidate compound is a member selected from the group consisting of a small molecule, a polynucleotide, a modified polynucleotide, a polypeptide, an antibody, an antibody fragment and a modified antibody.

39. (currently amended) ~~The method of claim 1~~ A method for screening for compounds that affect uncoupling, comprising:

contacting a mammalian cell or tissue sample with a candidate compound;
analyzing expression of a polypeptide, wherein the polypeptide is encoded by
SEQ ID NO:1; and
analyzing mitochondrial membrane potential,
wherein a change in expression of the polypeptide indicates that the compound
affects uncoupling.

40. (currently amended) ~~The method of claim 1~~ A method for screening for compounds that affect uncoupling, comprising:

contacting a mammalian cell or tissue sample with a candidate compound;
analyzing expression of a polypeptide, wherein the polypeptide is encoded by
SEQ ID NO:2; and
analyzing mitochondrial membrane potential,
wherein a change in expression of the polypeptide indicates that the compound
affects uncoupling.

41. (previously presented) A method for screening for compounds that affect uncoupling, comprising:

contacting a mammalian cell or tissue sample with a candidate compound; and
analyzing expression of a polypeptide encoded by SEQ ID NO:1 or 2,
wherein a change in expression of the polypeptide indicates that the compound affects uncoupling.

42. (canceled)

43. (previously presented) The method of claim 41, further comprising analyzing mitochondrial membrane potential in the sample.

44. (currently amended) A method for screening for compounds that affect uncoupling, comprising:

contacting a mammalian cell or tissue sample with a candidate compound suspected of affecting uncoupling; and
analyzing expression of a polypeptide having at least ~~90~~95% sequence identity to a polypeptide encoded by SEQ ID NO:1 or 2 wherein the polypeptide having at least 95% sequence identity has uncoupling activity,

wherein a change in expression of the polypeptide having at least 95% sequence identity indicates that the compound affects uncoupling.

45. (canceled)

46. (previously presented) The method of claim 44, wherein the mammalian cell or tissue sample is a human cell or tissue sample.

47-51. (canceled)

52. (previously amended) The method of claim 44, wherein the analyzing of expression of the polypeptide comprises analyzing expression of a polypeptide having at least 95% amino acid sequence identity to the polypeptide encoded by SEQ ID NO:1.

53. (previously amended) The method of claim 44, wherein the analyzing of expression of the polypeptide comprises analyzing expression of a polypeptide having at least 95% amino acid sequence identity to the polypeptide encoded by SEQ ID NO:2.

54. (previously amended) The method of claim 46, wherein the analyzing of expression of the polypeptide comprises analyzing expression of a polypeptide having at least 95% amino acid sequence identity to the polypeptide encoded by SEQ ID NO:1.

55. (previously presented) The method of claim 46, wherein the analyzing of expression of the polypeptide comprises analyzing expression of a polypeptide having at least 95% amino acid sequence identity to the polypeptide encoded by SEQ ID NO:2.

56. (previously presented) The method of claim 44, wherein the candidate compound is a member selected from the group consisting of a small molecule, a polynucleotide, a modified polynucleotide, a polypeptide, an antibody, an antibody fragment and a modified antibody.

57. (currently amended) ~~The method of claim 44,~~ A method for screening for compounds that affect uncoupling, comprising:

contacting a mammalian cell or tissue sample with a candidate compound

suspected of affecting uncoupling; and

analyzing expression of a polypeptide, wherein the polypeptide is encoded by SEQ ID NO:1; and

wherein a change in expression of the polypeptide indicates that the compound affects uncoupling.

58. (currently amended) ~~The method of claim 44,~~ A method for screening for compounds that affect uncoupling, comprising:
contacting a mammalian cell or tissue sample with a candidate compound suspected of affecting uncoupling; and
analyzing expression of a polypeptide, wherein the polypeptide is encoded by SEQ ID NO:2; and
wherein a change in expression of the polypeptide indicates that the compound affects uncoupling.

59.-73. (cancelled)

74. (new) The method of claim 41, wherein the analyzing of expression of the polypeptide comprises analyzing expression of a polypeptide encoded by SEQ ID NO:1.

75. (new) The method of claim 41, wherein the analyzing of expression of the polypeptide comprises analyzing expression of a polypeptide encoded by SEQ ID NO:2.

76. (new) The method of claim 41, wherein the candidate compound is a member selected from the group consisting of a small molecule, a polynucleotide, a modified polynucleotide, a polypeptide, an antibody, an antibody fragment and a modified antibody.